

Comparing Service Priorities Between Staff and Users in Association of Research Libraries (ARL) Member Libraries

Damon E. Jaggars, Shanna Smith Jaggars, and Jocelyn
S. Duffy

abstract: Using the results for participating Association of Research Libraries from the 2006 LibQUAL+® library service quality survey, we examine the service priorities of library staff (for example, whether desired scores for each survey item are above or below average) and the extent to which they are aligned with the priorities of undergraduates, graduate students, and faculty. Item priorities were compared among the four groups using hierarchical linear modeling (HLM) to correct for the non-independence of responses within institutions. Results indicate that substantial misalignments between library staff and users exist; library staff set a lower service priority for most LibQUAL+® Information Control items and a higher priority on almost all Affect of Service items than did users.

Introduction

In 2008, the authors published the results of a study examining how well the service priorities of library staff at the University of Texas at Austin (UT Austin) aligned with the users they serve.¹ Using results from the 2005 administration of the LibQUAL+® library service quality survey at UT Austin, individual responses were analyzed to identify service priority gaps between library staff and undergraduates, graduate students, and faculty.

The most substantive result from the UT Austin analysis was that library staff set a lower priority on several survey items in the area of Information Control—items



focusing on collection scope and breadth and the ability for users to find information independently—than did library users. In addition, service priority gaps between library staff and users were identified in the area of Affect of Service—items in this area focus on the attitudes and abilities of library staff when assisting users—providing some confirmation of the assertion that users are becoming less interested in mediated, in-person interactions with library staff and more interested in unmediated access to quality, easy-to-use content.² On Library as Place survey items—those relating to library facilities and the use of library space—library staff tended to prioritize the items higher than faculty, lower than undergraduates, and similarly to graduate students, reflecting the disparate, and sometimes conflicting, ways in which core user groups tend to utilize research library facilities.

For the current study, we extend this analysis to investigate whether our local results can be generalized across the entire Association of Research Libraries (ARL) cohort. The analysis will identify whether there are service priority gaps between library staff and

Our findings may also prove useful as management information for library administrators to examine users' service priorities and to integrate the results of such an analysis into organizational decision-making and planning processes.

the users they serve across all participating ARL libraries and, if so, where those gaps occur across the three LibQUAL+® service dimensions. Our intention is to promote discussion among library administrators and staff about users' needs and how closely research library staffs' service priorities align with those needs. The method described provides a framework for analyzing relative service priorities across user groups. Our findings may also prove useful as management information for library

administrators to examine users' service priorities and to integrate the results of such an analysis into organizational decision-making and planning processes.

Methods

Sample

This study is based on results from the LibQUAL+® library service quality survey conducted in 2006.³ The sample for the study includes all participating ARL libraries for the American English protocol of the 2006 administration that surveyed all three user groups (undergraduates, graduate students, and faculty) and library staff. The survey administration covered 37 ARL libraries, approximately 30 percent of the ARL membership, with 26,292 usable surveys submitted: 10,171 from undergraduates; 9,705 from graduate students; 5,812 from faculty; and 604 from library staff. LibQUAL+® administrative staff removed all personal and institutional identifiers before providing the authors with the analysis dataset.



Measures

Modeled on SERVQUAL, an assessment tool widely used within service industries, LibQUAL+® provides a library service quality assessment framework based on the assumption that “the only criteria that count in evaluating service quality are defined by customers. ...All other judgments are essentially irrelevant.”⁴ Thus, LibQUAL+® assumes the primacy of faculty and student perceptions as the basis for judging library service quality. The LibQUAL+® survey instrument asks users to provide ratings of library service quality in three areas: Affect of Service, Library as Place, and Information Control. Each area of service quality is measured with numerous individual items, ranging from 5 items (for Library as Place) to 9 items (Affect of Service). Using a Likert scale ranging from 1 (low) to 9 (high), respondents provide three types of ratings for each item: the minimum level of quality that is acceptable, the desired level of quality, and the current perceived level of service quality.⁵

Analysis

The authors detail the calculation of the priority score, which represents the extent to which a given service item is above or below the average desired level, across all items for that respondent.⁶ As an illustration, suppose that a respondent reports very high desired scores, with a personal average of 8.8 across all the items on the survey. However, the individual’s desired score for the item “A comfortable and inviting location” is a relatively low 7, whereas the score for “Employees who deal with users in a caring fashion” is a 9. After re-scaling around this respondent’s individual mean of 8.8, the priority scores are -1.8 for the inviting location item (a below average personal priority) and +0.2 for the caring for users item (an above average personal priority). An item with a priority score between ± 0.10 is an “average” priority for the individual, whereas an item beyond ± 0.50 is a “very” high or low priority. An item falling between -0.10 and -0.50 is considered a “moderately low” priority, and an item falling between $+0.10$ and $+0.50$ is a “moderately high” priority.

Typically, researchers use analysis of variance (ANOVA) or classical regression to compare among several groups in terms of a continuous measure, such as the priority score. However, these traditional techniques can be problematic for the analysis of data gathered from respondents within institutions. Individuals who attend or work within the same college tend to be more similar to one another than they are to individuals who attend other colleges. This “clustering” of respondent outcomes within schools violates the traditional statistical assumption of independence, which underlies ANOVA and regression techniques. Hierarchical linear models (HLM) (also popularly known as mixed or multilevel linear models) extend the classical regression framework to allow violations of the independence assumption. We used this hierarchical linear modeling approach within the software program HLM. Each individual’s priority score for a given item was predicted by dummy-coded status (undergraduate, graduate, or faculty, with library staff serving as the reference category) within a model allowing intercepts (for example, average library staff priority scores) to vary randomly across schools. For more details on random-intercept and other varieties of mixed models and how to

apply them in the context of respondents within schools, we recommend an in-depth discussion by Judith Singer.⁷

Results

The HLM coefficients presented in table 1 are interpreted similarly to traditional linear regression coefficients. Because priority scores were predicted by dummy-coded status variables with library staff as the reference, the *intercept* coefficient for each item represents the average library staff priority for that item. A significant *p*-value for an item's intercept denotes that the library staff priority for the item is significantly higher or lower than zero. In contrast, *slope* coefficients represent the *difference* in priority values between library staff and each of the other user groups. A significant *p*-value for an item's slope for a particular group (such as faculty) denotes that group's priority for that item is significantly higher or lower than the priority that library staff place on the item.

Thus, in table 1, the "library staff" column represents the average priority score for a given item across library staff. For example, for the first item, "Employees who instill confidence in users," library staff had a score of 0.03, indicating that they view the item as an average priority. In general, library staff had positive values for Affect of Service items, indicating that they judged these items to be an above-average priority. In contrast, they tended to have negative values for Library as Place items, indicating that ARL library staff see these items as below-average priorities.

The remaining columns in table 1 indicate how the given user group differs from library staff. For example, for "Employees who instill confidence in users," undergraduates prioritized the item -0.63 points *lower* than did library staff (a priority of -0.60, or a very low priority); this difference was significant at the $p < .001$ level. Graduate students rated the item's priority as -0.51 less than did library staff ($p < .001$), and faculty rated the item's priority as -0.17 less than did library staff ($p < .001$). As another illustration, consider the Library as Place item "Library space that inspires study and learning." Library staff rated it as a moderately low priority of -0.19, which is significantly ($p < .001$) below the average priority of zero. Undergraduates rated this item significantly higher ($p < .001$) than library staff, whereas graduate students ($p < .05$) and faculty ($p < .001$) rated it significantly lower than did library staff.

If a given difference is not significant, the user group prioritizes the item similarly to library staff. For example, for "The printed library materials I need for my work," library staff rated the item as an average priority (-0.04), and undergraduates rated the item 0.05 points higher (that is, a priority score of 0.01; thus undergraduates also considered this item an average priority). The non-significant difference denotes that library staff and undergraduates place a statistically similar priority on the item. Not surprisingly given our large sample, most coefficients in the table are significant. Accordingly, we recommend interpreting the importance of coefficients based on the substantive size of the difference. For example, a difference of less than 0.10 indicates a rather negligible difference of less than a tenth of a point; a difference of 0.50, however, indicates a fairly substantial difference.



Table 1

Item	Library Staff (Intercept)	Undergraduate (Slope)	Graduate (Slope)	Faculty (Slope)
<i><u>Affect of Service</u></i>				
Employees who instill confidence in users	0.03 (0.04)	-0.63 (0.04)***	-0.51 (0.04)***	-0.17 (0.04)***
Giving users individual attention	-0.19 (0.04)***	-0.78 (0.06)***	-0.59 (0.04)***	-0.12 (0.04)**
Employees who are consistently courteous	0.36 (0.03)***	-0.30 (0.03)***	-0.32 (0.03)***	-0.23 (0.03)***
Readiness to respond to users' questions	0.26 (0.03)***	-0.35 (0.02)***	-0.23 (0.03)***	-0.07 (0.03)*
Employees who have the knowledge to answer user questions	0.26 (0.02)***	-0.20 (0.03)***	-0.14 (0.03)***	-0.06 (0.03)*
Employees who deal with users in a caring fashion	0.01 (0.03)	-0.13 (0.03)***	-0.23 (0.03)***	-0.23 (0.03)***
Employees who understand the needs of their users	0.16 (0.03)***	-0.32 (0.03)***	-0.24 (0.03)***	-0.08 (0.03)*
Willingness to help users	0.28 (0.02)***	-0.37 (0.02)***	-0.31 (0.02)***	-0.18 (0.02)***
Dependability in handling users' service problems	0.09 (0.03)**	-0.14 (0.04)***	-0.08 (0.03)*	0.10 (0.03)**
<i><u>Information Control</u></i>				
Making electronic resources accessible from my home or office	-0.03 (0.06)	0.33 (0.07)***	0.56 (0.06)***	0.59 (0.07)***
A library Web site enabling me to locate information on my own	0.33 (0.03)***	-0.03 (0.04)	0.16 (0.04)***	0.27 (0.04)***
The printed library materials I need for my work	-0.04 (0.04)	0.05 (0.04)	0.14 (0.03)***	0.17 (0.04)***
The electronic information resources I need	-0.04 (0.03)	0.20 (0.03)***	0.50 (0.03)***	0.55 (0.04)***
Modern equipment that lets me easily access needed information	0.13 (0.03)***	0.17 (0.03)***	0.19 (0.03)***	0.16 (0.03)***
Easy-to-use access tools that allow me to find things on my own	0.12 (0.03)**	0.10 (0.03)**	0.20 (0.03)***	0.30 (0.04)***

Table 1, continued.

Item	Library Staff (Intercept)	Undergraduate (Slope)	Graduate (Slope)	Faculty (Slope)
Making information easily accessible for independent use	0.11 (0.02)***	0.08 (0.02)**	0.18 (0.02)***	0.24 (0.03)***
Print and/or electronic journal collections I require for my work	0.13 (0.04)***	0.07 (0.04)	0.39 (0.04)***	0.46 (0.05)***
<i>Library as a Place</i>				
Library space that inspires study and learning	-0.19 (0.04)***	0.33 (0.04)***	-0.08 (0.04)*	-0.52 (0.06)***
Quiet space for individual activities	-0.49 (0.05)***	0.61 (0.05)***	0.25 (0.06)***	-0.36 (0.06)***
A comfortable and inviting location	-0.18 (0.03)***	0.32 (0.04)***	0.02 (0.04)	-0.38 (0.05)***
A getaway for study, learning, or research	-0.28 (0.04)***	0.44 (0.04)***	0.13 (0.04)**	-0.34 (0.04)***
Community space for group learning and group study	-0.92 (0.09)***	0.61 (0.09)***	-0.12 (0.09)	-0.93 (0.10)***

Overall, table 1 shows that every user group prioritized every Affect of Service item significantly lower than did library staff, and every user group prioritized every Information Control item significantly higher than did library staff (with the exception of three items, which library staff rated similarly to undergraduates). For Library as Place, undergraduates prioritized every item significantly higher than did library staff, and faculty prioritized every item significantly lower than did library staff. For graduate students, Library as Place results were mixed; graduate students prioritized one item lower, two items higher, and two items similarly to library staff.

As noted above, table 1 presents coefficients from the statistical model, not the estimated priority scores for each group. In order to visually represent the results in a more intuitive fashion, figures 1 through 3 plot the estimated priority scores for each item by group.

Discussion

The misalignments in service priorities between library staff and users found in the local analysis were confirmed and expanded in the ARL cohort analysis. Library staff set a higher priority on all Affect of Service items and a lower priority on most Information

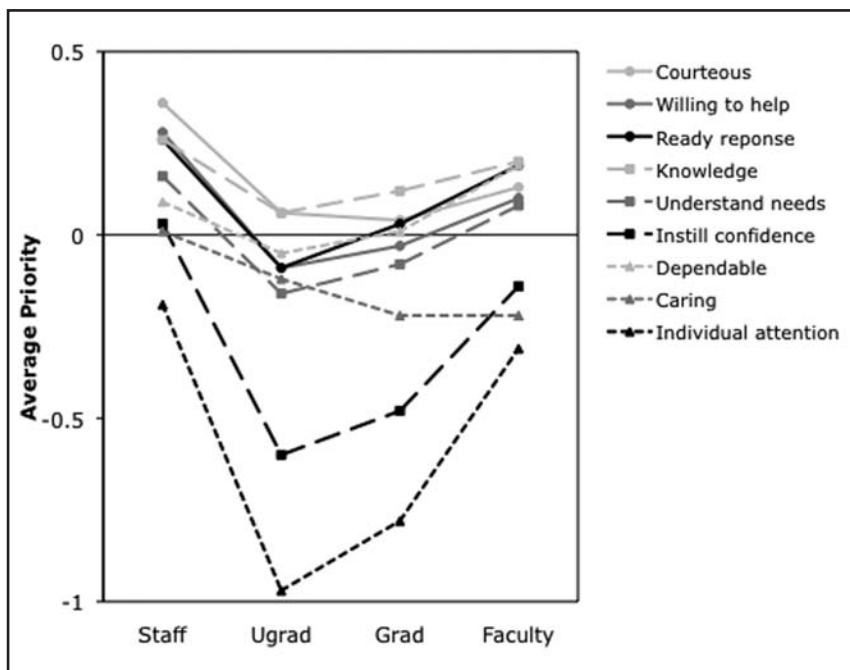


Figure 1

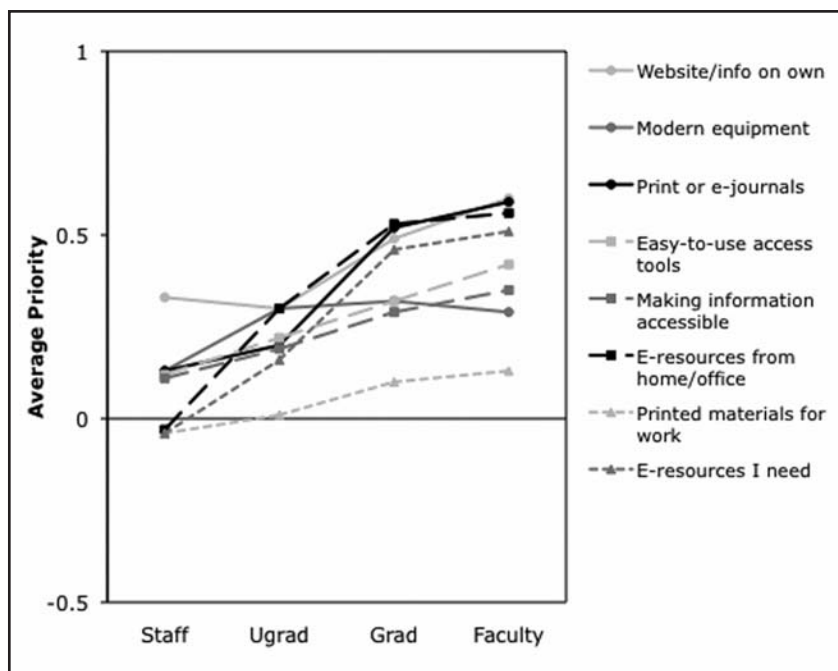


Figure 2

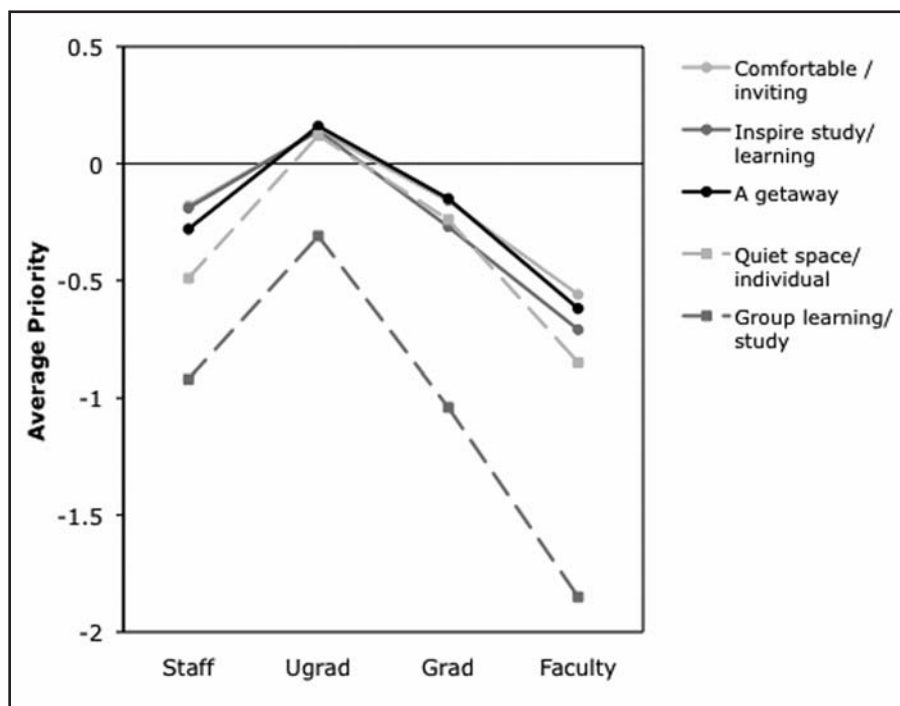


Figure 3

Control items than did the users they serve. Specifically, all three user groups prioritized every Affect of Service item significantly lower than did library staff. Users also prioritized all Information Control items significantly higher than did library staff, except for three items ("A library Web site enabling me to locate information on my own," "The printed library materials I need for my work," and "Print and/or electronic journal collections I require for my work"), which library staff rated similarly to undergraduates but lower than faculty and graduate students.

When considered in the context of how users actually use (and prefer to use) library and non-library resources when seeking information, this substantial misalignment

In general, users clearly prioritize the ability to engage in self-directed, unmediated information seeking, utilizing easy-to-use online resources.

on Information Control items should be seen as problematic by library leaders interested in maintaining and expanding relevance for their core constituents. In general, users clearly prioritize the ability to engage in self-directed, unmediated information seeking, utilizing easy-to-use online resources. Using the University of Texas at Austin as an example, 19 percent of faculty, graduate students, and undergraduates report daily use of the physical library; and 32 percent report using the

library Web site daily versus 79 percent reporting daily use of Google, Yahoo, or other non-library information gateways.⁸ Users routinely choose search engines over physical



libraries or library Web sites to begin information searches, and they rate search engines higher than librarians on both the quality and quantity of information found.⁹ Given such an operating environment, the misalignment between library staff and users in the area of Information Control is troubling. Library administrators and operational staff must set a higher priority on supporting users' evolving needs and preferences or risk a further reduction in relevance as users increasingly pursue non-library alternatives.

For Affect of Service items, library staff set a higher service priority on all items than did all three user groups. We should not be surprised that library staff place a premium on high quality service interactions with users. In fact, the relative high priority staff place on service interactions should be seen as positive confirmation of their commitment to serving users well. When viewed with the aforementioned differences on most Information Control items and users' well-documented preference for unmediated access to quality, easy-to-use content, however, these misalignments in Affect of Service priorities reveal a disconnect between library staff and their users concerning what is most important in providing library services. Library staff are more focused on the quality of the attitudes and abilities of staff during mediated service interactions. Users are more focused on getting the information they need on their own terms and less worried about mediated interactions or the attributes of the staff providing library services.

As in the local study, library staff tended to prioritize higher than faculty, lower than undergraduates, and similarly to graduate students on Library as Place items. Staff prioritized all Library as Place items higher than faculty and lower than undergraduates. On two of five items, library staff prioritized items similarly to graduates students. Graduate students prioritized higher than staff on the items "Quiet space for individual activities" and "A getaway for study, learning, or research" but lower on the item "Library space that inspires study and learning." Such results reflect the dissimilar ways in which different user groups tend to utilize research library facilities. Undergraduates often view physical facilities as work and social spaces, prioritizing comfortable, inviting space that enables learning in its varied forms. Faculty members often view our physical facilities as content warehouses—storage space for their research and teaching materials. Graduate students tend to straddle these views, highly valuing the content necessary for successful research and the availability of adequate space in which to work. The multiple misalignments on Library as Place items across the user groups should serve as reminders for both staff and library managers of how differently faculty, undergraduates, and graduate students prioritize service when it comes to library facilities.

The results of the current study indicate a significant disconnect between the service priorities of library staff and those of our core user groups, especially in the areas of Information Control and Affect of Service. This disparity is disconcerting, especially when viewed along side how users report they actually use library and non-library resources when seeking information. It appears as if library staff might not have come to terms with the extent to which many users de-emphasize traditional mediated inter-

Library staff are more focused on the quality of the attitudes and abilities of staff during mediated service interactions.



actions with library staff and prioritize unmediated access to easy-to-use content and services. This poses an obvious challenge for library administrators and staff in order

The results of the current study indicate a significant disconnect between the service priorities of library staff and those of our core user groups, especially in the areas of Information Control and Affect of Service.

to better align organizational service priorities, manifested in resource allocations and service programming, with the actual information-seeking behaviors and service priorities of the users they serve. It should be noted that the current analysis is limited to the identification of potential misalignments in service priorities between users and library staff, as indicated by LibQUAL+® survey results. There

is no attempt to make any connection between previous library staff actions and the service priorities users report. Rather, the purpose of the study is to illuminate differences between the service priorities of users and library staff and to provide useful information for focusing resources and service efforts, with the goal of maintaining relevance to library users.

Limitations

A possible limitation of this analysis, as with the earlier analysis of local data, is the relatively small number of library staff included in our sample. For our analysis, we included all ARL libraries participating in LibQUAL+® in 2006 that surveyed all three user groups and library staff. Six hundred four library staff submitted usable surveys, whereas participating libraries employed 3,617 professional staff and 5,407 support staff (6.7 percent of total library staff; 2.3 percent of total usable surveys submitted). It is possible that some type of response bias affected results given this relatively low response rate for library staff (for example, only the staff most committed to high-quality service were motivated to respond to the survey.) The impact of such a bias would more likely affect the absolute desired ratings of respondents, however, and would less likely have an impact on the relative priorities used in this analysis.

Another possible limitation might be the point of view staff take when responding to the survey instrument. There is no reliable way of knowing whether staff members respond from their professional point of view as service providers or from that of the users they serve. It is also unclear if making this distinction is possible or would significantly affect respondents' desired ratings. Given their dual roles as information providers and consumers, it is unclear that it is possible for library staff to successfully distinguish between the two when responding to the survey. There is ample evidence that we all suffer from the inability to eliminate this type of bias from our interpretation of information.¹⁰

Lastly, this analysis relies on the assumptions that users' desired scores on the LibQUAL+® survey can be used as the basis of a ranking of users' service priorities by indicating the relative importance of a survey item (and the service that item represents). The survey instrument does not explicitly ask respondents to prioritize the



items in order of importance, thus spurring the idea for creating a priority index based on desired mean rankings.

Future Research

After confirming that the results from the local analysis can indeed be generalized across the ARL cohort, it might be useful to attempt a historical, longitudinal analysis to investigate any divergence of service priorities between staff and users over time. If a pattern can be found, we might question whether the divergence detected is accelerating over time, creating a growing gap between the service priorities of staff and users as user desires and behaviors rapidly evolve. Such results would have serious implications for library leaders, especially while modeling future services, the delivery models for those services, and staff recruitment and development to serve a user community increasingly disconnected from staff service priorities. Several years of LibQUAL+® survey data at both the local and cohort levels are available for attempting such an analysis.

Damon E. Jaggars is associate university librarian for collections and services, Columbia University Libraries/Information Services, New York, NY; he may be contacted via e-mail at: djaggars@columbia.edu.

Shanna Smith Jaggars is senior research associate, Teachers College, Columbia University, New York, NY; she may be contacted via e-mail at: jaggars@tc.edu.

Jocelyn S. Duffy is library executive assistant, Portland State University Library, Portland, OR; she may be contacted via e-mail at: jduffy@pdx.edu.

Notes

1. Jocelyn Duffy, Damon Jaggars, and Shanna Smith, "Getting our Priorities in Order: Are Our Service Values in Line With the Communities We Serve?" *Performance Measurement and Metrics* 9, 3 (2008): 171–91.
2. Susan Edwards and Mairead Browne, "Quality in Information Services: Do Users and Librarians Differ in Their Expectations?" *Library and Information Science Research* 17, 2 (1995): 178–9.
3. Association of Research Libraries, "LibQUAL+®: Charting Library Service Quality," ARL, <http://www.libqual.org/> (accessed June 23, 2009).
4. Valarie Zeithaml, A. Parasuraman, Leonard Berry, *Delivering Quality Service: Balancing Customer Perceptions and Expectations* (New York: Free Press, 1990), 16.
5. Association of Research Libraries, "Sample Screens from the LibQUAL+™ Survey," ARL, <http://www.libqual.org/Information/Sample/index.cfm> (accessed June 23, 2009).
6. Duffy, Jaggars, and Smith, 174–5.
7. Judith Singer, "Using SAS PROC MIXED to Fit Multilevel Models, Hierarchical Models, and Individual Growth Models," *Journal of Educational and Behavioral Statistics* 24, 4 (1998): 323–55.
8. Colleen Cook et al., *LibQUAL+® 2006 Survey: University of Texas at Austin* (Washington, D.C.: Association of Research Libraries, 2006), 35.
9. Cathy De Rosa et al., *Perceptions of Libraries and Information Resources* (Dublin, OH: OCLC, 2005), 2–21–2–24.



10. Max Bazerman, Kimberly Morgan, and George Loewenstein, "The Impossibility of Auditor Independence," *Sloan Management Review* 38, 4 (Summer 1997): 89–94; David Messick, "Equality, Fairness, and Social Conflict," *Social Justice Research* 8, 2 (June 1995): 153–73; and David Messick and Keith Sentis, "Fairness and Preference," *Journal of Experimental Social Psychology* 15, 4 (July 1979): 418–34.